

# **MULTIPLE LAYER DIRECTIONALLY ORIENTED NONWOVEN FIBER MATERIAL AND METHODS OF MANUFACTURING SAME**

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## **ABSTRACT OF THE DISCLOSURE**

Disclosed herein are embodiments of a multi-layer nonwoven fiber material, and related methods of manufacturing the material. In one exemplary embodiment, the fiber material includes a first layer of directionally aligned fibers together with a second layer of randomly dispersed fibers dispersed over the first layer. Consistent with one exemplary method for manufacturing a nonwoven fiber material, the method includes dispersing a first plurality of fibers horizontally in one or more predetermined directions, as well as dispersing a second plurality of fibers horizontally in random directions. In such an embodiment, the second plurality of fibers is dispersed over the first plurality of fibers. Moreover, an exemplary embodiment of a roofing shingle employing a nonwoven fiber material as described herein is as disclosed.

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